

## REMARKS

Claims 1-3, 5-9, 14-18, and 21, 22, 25, and 26 are pending. The pending claims stand rejected under 35 USC 112, first paragraph, as set forth in sections 1 and 2 of the Office Action, and under 35 USC 112, second paragraph, as set forth in sections 3 and 4 of the Office action. These rejections have resulted from use of the “sideways angle” limitation, as explained in the Office Action.

Independent claims 1 and 14 are amended herein to use essentially the exact language from the specification to describe the combination of angles of the air jets. The independent claims call for the discrete jets of air to be at a downward angle with respect to a horizontal plane and a sideward angle from the machine direction (MD) of the nonwoven web. This amendment is clearly supported by the original specification, as described in greater detail below, and distinctly claims the invention.

Independent claims 1 and 14 are drawn to embodiments wherein the air jets are disposed at a combination of angles. At page 15, first paragraph, of the original specification, the combination of angular orientations of the air jets is described as follows:

In certain embodiments combinations of angles may also be desirable, such as ***where the air jets are directed at an angle with respect to the machine direction and also directed at an angle with respect to the horizontal plane.*** Furthermore, although not shown in the process of FIG. 1, it is desirable to employ more than one non-contacting deflector, that is, to use two non-contacting deflectors as opposed pairs as is illustrated in FIG. 4A and FIG. 4B. In FIG. 4A, a pair of non-contacting deflectors, in this case paired air jet deflectors 410 and 420, are shown in top view. The air jet deflectors 410 and 420 are similar to the air jet deflector which was depicted in FIG. 3 and are punctuated by a series of jet holes (FIG. 3) which are drilled or otherwise formed in the air plenums. The dashed lines A and B illustrate the air jet flow paths during operation of the air jet deflectors. ***As shown in FIG. 4A, the air jet flow paths are oriented at about a 45 degree angle with respect to arrow MD which represents the machine direction (direction of material production).*** A side

view of a pair of air jet deflectors is shown in FIG. 4B. For the embodiment shown in FIG. 4B, the air jet flow paths during operation of the air jet deflectors are oriented at about a 45 degree downward angle with respect to the horizontal plane (arrow E). The air jet flow paths are illustrated by dashed lines C and D, respectively, for air jet deflectors 460 and 470. (emphasis added)

As explained above, the fibers travel in a vertical path and are deposited onto the forming surface, which runs in the machine direction (MD) below the deflectors. Fig. 4B (below) is a side view of the air jets, wherein the fibers travel vertically downward in the space between the deflectors 460 and 470 :

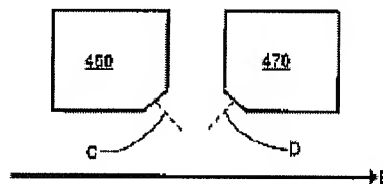


FIG. 4B

The air jet flow paths are represented by the dashed lines C and D and are oriented at a downward angle with respect to the horizontal plane E. Fig. 4A (below) is a **top** view of the deflection devices:

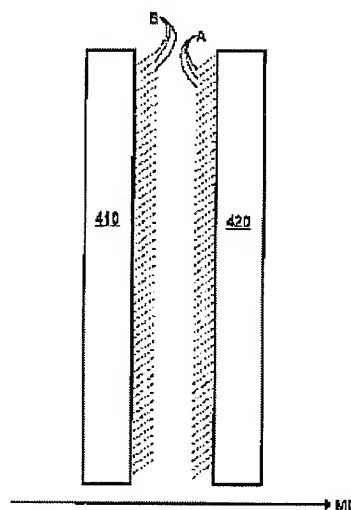


FIG. 4A

The vertical flow path of the fibers is between the deflectors ***in the plane that is perpendicular to the page***. The fibers are deposited onto a forming surface that moves below the devices in a direction represented by the line "MD." The dashed lines "A" and "B" in Fig. 4A represent the angle of the air jets with respect to the MD line of direction. In the embodiment discussed at page 19, lines 9-12, of the original specification, this angle is expressly defined as ***"sideward from the machine direction."***

From the original description and figures, those skilled in the art readily understand that the "downward angle" is with respect to a horizontal plane, as illustrated in Fig. 4B and explained in the passage cited above. The "sideward angle" component is with respect to the MD line and conveys that the angle extends sideward from the MD line, as illustrated in Fig. 4A and explained in the passages cited above. Expressed another way, the angle extends "sideward" in that it is not parallel to the MD line.

At page 14, last paragraph, the specification expressly distinguishes the "sideward" and "downward" angles from a configuration wherein the air jets are oriented perpendicular to the flow path of the fiber stream:


In certain embodiments, the desired fiber orientation may be achieved by having the jet holes 320 (FIG. 3) oriented to produce air jets which are directed substantially perpendicular to the flow path of the fiber stream exiting the fiber drawing unit 70 (FIG. 1). Generally speaking, the fiber stream will be traveling in a vertical path toward the foraminous forming surface, ***so where the air jets are directed substantially perpendicular to the flow path of the fiber stream the air jets will be directed substantially in the machine direction and substantially parallel to the horizontal plane***. However, depending on desired fiber orientation, ***it may also be desirable to have the air jets directed at an angle with respect to the machine direction. For example, the air jets may be directed at an angle with respect to the machine direction of up to about 60 degrees, or more***. Furthermore, it may be desirable to have the air jets directed at an angle with respect to the horizontal plane, that is, the air jets may be oriented at an upward or downward angle of up to about 60 degrees.

As expressly differentiated in the passage cited above, orientation of the air jets at "an angle with respect to the machine direction" is different from an orientation wherein the air jets are "directed substantially in the machine direction." In other words, air jets that are parallel to the machine direction ("in the machine direction") do not form "an angle with respect to the machine direction," and vice versa.

The previous prior art and provisional double patenting rejections have been withdrawn. With the present Amendment, it is respectfully submitted that all pending claims are allowable and that the application is in condition for allowance. Favorable action thereon is respectfully requested. The Examiner is encouraged to contact the undersigned at his convenience should he have any questions regarding this matter or require any additional information.

Respectfully submitted,

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